

**OPTIMAL ROUTE SELECTION IN A CONTENT DELIVERY  
NETWORK**

**ABSTRACT OF THE DISCLOSURE**

A routing mechanism, service or system operable in a distributed  
5 networking environment. One preferred environment is a content delivery  
network (CDN) wherein the present invention provides improved connectivity  
back to an origin server, especially for HTTP traffic. In a CDN, edge servers are  
typically organized into regions, with each region comprising a set of content  
servers that preferably operate in a peer-to-peer manner and share data across a  
10 common backbone such as a local area network (LAN). The inventive routing  
technique enables an edge server operating within a given CDN region to retrieve  
content (cacheable, non-cacheable and the like) from an origin server more  
efficiently by selectively routing through the CDN's own nodes, thereby avoiding  
network congestion and hot spots. The invention enables an edge server to fetch  
15 content from an origin server through an intermediate CDN server or, more  
generally, enables an edge server within a given first region to fetch content from  
the origin server through an intermediate CDN region. As used herein, this  
routing through an intermediate server, node or region is sometimes referred to as  
“tunneling.”

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